SUBEE INDUSTRIES

To set up and program an LED light to blink using an Arduino

Components:

1. **Arduino Uno** (or any compatible board)
2. **LED** (any color)
3. **220-ohm Resistor** (to limit current to the LED)
4. **Breadboard**
5. **Jumper wires**

Circuit Setup:

1. **Connect the LED**: Place the LED on the breadboard.
   - The **longer leg (anode)** of the LED connects to **pin 13** on the Arduino.
   - The **shorter leg (cathode)** of the LED connects to one side of the **220-ohm resistor**.
2. **Ground connection**: Connect the other side of the 220-ohm resistor to the **GND** (ground) pin on the Arduino.
3. Power the Arduino using a USB cable or an external power source.

The basic circuit would look like this:

- Pin 13 → Anode (longer leg) of LED
- Cathode of LED → Resistor → GND

Steps to Upload the Code:

1. **Connect your Arduino** to your computer using a USB cable.
2. **Open Arduino IDE** and paste the above code.
3. Select your **Arduino board** and **COM port** in the IDE.
4. **Click Upload** to upload the code to the Arduino.

How the Code Works:

- `pinMode(ledPin, OUTPUT);` sets the pin 13 as an output pin.
- `digitalWrite(ledPin, HIGH);` turns the LED on.
- `delay(1000);` introduces a delay of 1000 milliseconds (1 second).
- `digitalWrite(ledPin, LOW);` turns the LED off.
- `delay(1000);` introduces a delay again before restarting the loop.

After uploading the code, the LED connected to pin 13 will start blinking with a 1-second interval.